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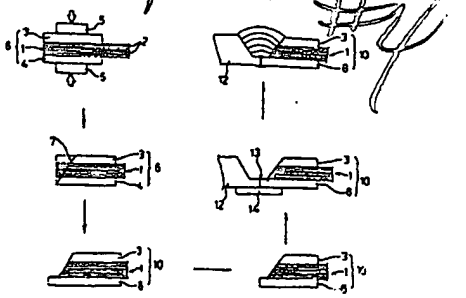
(54) METHOD FOR WELDING SHEET METAL MULTI-LAYER BODY TO MIDDLE THICK PLATE
(11) 6-106347 (A) (43) 19.4.1994 (19) JP
(21) Appl. No. 3-217857 (22) 2.8.1991
(71) ASAHI PLANT KOGYO K.K. (72) MIKITO KAI
(51) Int. Cl⁵. B23K9/035,B23K9/167,B23K9/235,B23K31/00//B23K9/00

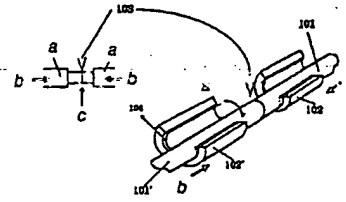


PURPOSE: To provide a welding method by which a laminated sheet metal can be subjected to a butt welding to a middle thick plate without a defect, surely, and also, with satisfactory workability.

CONSTITUTION: A stay metal 4 and a strap 3 are arranged in the outside of the lower face of a sheet metal laminated body 1, and in the outside of the upper face, respectively, pressure force is allowed to work on at least one of this stay metal 4 and the strap 3, and the sheet metal laminated body 1 is subjected to pressure welding, by which a multi-layer body 6 is formed. By chamfering the end face part of this multi-layer body 6 by a grinder, the groove inclined surface 7 is formed. After eliminating the stay metal 4 from the multi-layer body 6, a lower side backing plate 8 is arranged in a state that it is protruded by 2-3mm from the end face of the sheet metal laminated body 1. In the inclined groove surface 7, the upper and the lower backing plates 3, 8 and the sheet metal laminated body 1 are tacked and fixed in a pitch of ≦10mm. After tacking, the end face of the laminated body 1 and the end face of a middle thick plate 12 are butted and arranged, and its weld line part is subjected to the multi-layer welding after a first layer is subjected to a penetration welding by TIG welding.

OHM 105

(54) WELDING EQUIPMENT
(11) 6-106348 (A) (43) 19.4.1994 (19) JP
(21) Appl. No. 3-331350 (22) 20.11.1991
(71) TADAHIRO OMI (72) TADAHIRO OMI(1)
(51) Int. Cl⁵. B23K9/08,B23K9/167,B23K15/00,B23K26/00

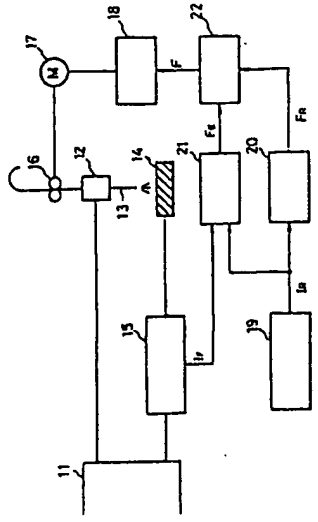


PURPOSE: To prevent a metal from adhering to the vicinity of the surface of a welding zone, improve the flatness of the surface of the welding zone and reduce the deposit quantity of chrome carbide caused by the reduction of the heat input quantity by arranging a means for applying a magnetic field having a component vertical to the surface of the welding zone.

CONSTITUTION: In the welding device for connecting plural members by melting the respective welding zones of plural members, by forming a magnetic field having a component vertical to the surface of the welding zone by using permanent magnets 102, 102', etc., metallic fume generated at the time of welding is left in the welding zone, the flow to the downstream side of a welding construction part is prevented, and it is prevented that the metallic fume is deposited onto a member to be welded. Also, as for a metallic melt, electric conductivity is high, therefore, the average property of the welding zone is improved by a magnetic field. Moreover, since the magnetic field can converge ions or electrons generated by a melting means, a beam can be narrowed down, and welding bead width can be finished narrowly.

a: magnet, b: magnetic field, c: welding zone

(54) CONSUMABLE ELECTRODE TYPE ARC CONTROLLER
(11) 6-106349 (A) (43) 19.4.1994 (19) JP
(21) Appl. No. 4-256042 (22) 25.9.1992
(71) KOBE STEEL LTD (72) TOKUJI MARUYAMA(4)
(51) Int. Cl⁵. B23K9/12



PURPOSE: To quickly obtain a current detection value which coincides with a welding set value by deriving a wire feed speed reference portion, based on the output signal of a current setting device, joining both of them together and outputting as the commanding value of a wire feed speed, and feeding a welding wire to a welding base metal at the feeding speed instructed by this commanding value.

CONSTITUTION: A control means calculates a wire feeding speed fluctuation portion so that a current detection value coincides with a current set value, based on the difference of outputs of a current detector 15 and a current setting device 19. On the other hand, in the case the current setting value is fluctuated, by its new current setting value, the optimal wire feeding speed is derived from the relation of the wire feeding speed and the current set value derived in advance, and it becomes a wire feeding speed reference portion. Subsequently, the control means joins together this wire feeding speed reference portion and the wire feeding speed fluctuation portion and outputs them as the commanding value of the wire feeding speed, and a driving means feeds a wire 13 to a weld-